## SYSTEMS AND METHODS FOR MULTI-OBJECTIVE PORTFOLIO ANALYSIS USING PARETO SORTING EVOLUTIONARY ALGORITHMS

## ABSTRACT OF THE DISCLOSURE

The systems and methods of the invention are directed to portfolio optimization and related techniques. For example, the invention provides a method for multi-objective portfolio optimization for use in investment decisions based on competing objectives and a plurality of constraints constituting a portfolio problem, the method comprising: generating an initial population of solutions of portfolio allocations; committing the initial population of solutions to an initial population archive; performing a multi-objective process, based on the initial population archive and on multiple competing objectives, to generate an efficient frontier, the multi-objective process including a evolutionary algorithm process, the evolutionary algorithm process utilizing a dominance filter, the efficient frontier being used in investment decisioning.